



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,631	02/20/2004	Eiichi Kubota	056208.53174US	4134

23911 7590 01/07/2008
CROWELL & MORING LLP
INTELLECTUAL PROPERTY GROUP
P.O. BOX 14300
WASHINGTON, DC 20044-4300

EXAMINER

LOPEZ, FRANK D

ART UNIT	PAPER NUMBER
----------	--------------

3745

MAIL DATE	DELIVERY MODE
-----------	---------------

01/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/781,631

Applicant(s)

KUBOTA ET AL.

Examiner

F. Daniel Lopez

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on October 17, 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 8-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/20/04;5/7/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Election/Restrictions

Claims 8-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 17, 2007.

Specification

The disclosure is objected to because of the following:

"a cylindrical groove and transverse aperture...are commonly provided halfway through the bore" (e.g. page 1 line 18-20) is confusing. "Halfway" means in the middle, suggesting that $L_a = L_{bc}$ (fig 6); but this is nowhere supported by the specification. Perhaps the specification should have stated that the groove and aperture are spaced axially from the ends of the bore (note that the claims indicate that the groove and aperture are halfway through the bore in an axial direction). Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 1-7 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 and 6 line 3 "the bore" has no antecedent basis. In claim 1 line marked 12-15 and claim 6 line 9-12 "a cylindrical groove provided halfway through the cross section of the bore of said cylinder in the axial direction" is confusing as to where the groove is located (see objection to the specification).

In claim 1 last 2 lines "varies depending on the specified position of either said plunger or bore" is confusing, as to how clearance varies (suggest that this be changed to --varies axially along the bore--).

In claim 6 line 11 "the bore of the cylindrical groove" is wrong and should be --the bore of the cylinder--. In claim 6 line 12 "the longitudinal section" has no antecedent basis and is confusing as to what section being referred to.

Claims not mentioned are indefinite, since they depend from claims 1 or 6.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Vincze. Vincze discloses a high pressure pump comprising a shaft like plunger (48, 74) reciprocating in a bore of a cylinder (24) in a housing (22), wherein one end of the plunger is connected to a compression chamber (59) and the other end is connected to a reciprocating motion drive (30); a transverse aperture (116) is connected to the bore through a cylindrical groove (114), provided between the compression chamber and the drive; and wherein the clearance between the bore and the plunger varies axially along the bore (e.g. fig 7).

Claim 6 is rejected under 35 U.S.C. § 102(b) as being anticipated by Applicant's admitted prior art. Applicant's admitted prior art discloses a high pressure pump comprising a shaft like plunger reciprocating in a bore of a cylinder (page 1 line 14), wherein one end of the plunger is connected to a compression chamber and the other end is connected to a reciprocating motion drive; a transverse aperture is connected to the bore through a cylindrical groove, provided between the compression chamber and the drive (page 1 line 18-20); wherein an axial length of the groove gradually widens toward the bore; and wherein an angle at a portion where the groove contacts the bore, with respect to the axial direction is between 5 and 25 degrees. The statements "It has been verified that a minute slack (upper side) 84 and a minute slack (lower side) 85...are formed in a very smooth shape, when the bore is finished by honing. This is because generation of burrs is reduced in the range between 5 and 25 degrees..." (page 15 line 11-24) suggest that this known and verified in the prior art. If applicant has discovered and verified this, indicate so in the response and in an amendment to the specification, and this rejection would be withdrawn.

Art Unit: 3745

Conclusion

Claims 2-5 and 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:00 AM -4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is 571-273-8300. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

/F. Daniel Lopez/

F. Daniel Lopez
Primary Examiner

Art Unit 3745

December 27, 2007